ABSTRACT

Background

Cancer of the ovary is the fourth most common cause of death which is related to cancer in India. This study evaluated the various prognostic factors in patients with epithelial ovarian cancer who had undergone either neoadjuvant chemotherapy and interval debulking or initial surgery followed by adjuvant chemotherapy. Immunohistochemical staining was also done 50 tumour blocks to evaluate the incidence of LASP-1 expression in normal ovarian tissue and tissue of epithelial ovarian cancer and to determine if the expression of LASP-1 is of prognostic significance in epithelial ovarian cancer.

Patients and Results

Two hundred and eighty patients presenting with epithelial cancer of the between January 2005 and December 2007 were analysed. The median duration of follow up for all patients was 2.74 years and 8.2 years for the living patients. The five year relapse free survival and overall survival of all patients was 36.5% and 31% respectively. Ninety seven patients had undergone primary surgery and 183 patients received neoadjuvant chemotherapy. Sixty six patients went on to have interval debulking surgery. Univariate and multivariate analysis were performed on the dataset using. On univariate analysis, age(P=0.012), menopausal status(P=0.047),

stage (P<0.0001), CA125 levels at presentation(P<0.001), histology(P<0.001), grade(P=0.001), primary treatment(P<0.001), type of chemotherapy used (P<0.0001), number of chemotherapy cycles administered (<0.0001) and residual bulk(<0.0001) were associated with survival status. Patients who underwent primary surgery had a significantly longer overall survival in univariate analysis (P<0.001). However this was not statistically significant on multivariate analysis. On subgroup analysis, we also found that the rate of optimal debulking was better in those patients who underwent primary surgery when compared to those who had interval surgery after neoadjuvant chemotherapy (HR 2.05, 95% CI 1.09 – 3.8, P =0.024) On multivariate analysis of all the variables, only stage, CA125 levels at presentation, type of chemotherapy used, number of cycles delivered and residual bulk significantly correlated with the survival status.

LASP-1 was not expressed in normal ovarian and fallopian tube. However, immunohistochemical staining for LASP-1 showed cytoplasmic staining of cancer cells 18% of the 50 tumours evaluated.

Conclusions: Advanced stage, CA125 levels >35 U/ml at presentation, non platinum based chemotherapy, lesser than 6 cycles of chemotherapy and suboptimal debulking are associated with poorer survival. LASP-1 is expressed in epithelial ovarian cancer. Since the percentage of patients expressing LASP-1 was only 18% studies which include higher number of

patients with LASP -1 expression will have to be undertaken to accurately correlate LASP-1 expression and survival.

Keywords: Epithelial Ovarian Cancer, LASP-1